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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/153,781	09/16/1998	LOUIS B. ROSENBERG	IMM053	6020
34300 7590 12/18/2008 PATENT DEPARTMENT (51851) KILPATRICK STOCKTON LLP 1001 WEST FOURTH STREET WINSTON-SALEM, NC 27101				
EXAMINER				
LIANG, REGINA				
ART UNIT		PAPER NUMBER		
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12/18/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

09/153,781

**Applicant(s)**

ROSENBERG ET AL.

**Examiner**

Regina Liang

**Art Unit**

2629

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11/13/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12-15, 17-23, 25, 36-40, 42, 43, 58-70, 72-76, 78-82, 92-96, 98-111, 113-116, 120 and 121 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

Continuation of Disposition of Claims: Claims pending in the application are 12-15, 17-23, 25, 36-40, 42, 43, 58-70, 72-76, 78-82, 92-96, 98-111, 113-116, 120 and 121.

## DETAILED ACTION

### *Continued Examination Under 37 CFR 1.114*

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/13/08 has been entered. Claims 12-15, 17-23, 25, 36-40, 42, 43, 58-70, 72-76, 78-82, 92-96, 98-111, 113-116, 120, 121 are pending.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### *Double Patenting*

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 12-15, 17-23, 25, 36-40, 42, 43, 58-70, 72-76, 78-82, 92-96, 98-111, 113-116, 120, 121 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-67 of U.S. Patent No. 5,956,484. Although the conflicting claims are not identical, they are not patentably distinct from each other because the invention defined in the claims at issue is an obvious variation of the invention defined in the claims of the patent.

The following is an example for comparing claim 12 of this application and claim 25 of the patent.

Claim 12 of this application	Claim 25 of the patent
A system comprising: <b>a first computer</b> means coupled to a network means; and <b>a second computer means coupled to said network means</b> , said second computer means remote from said first computer means,	A networked force feedback system comprising: A network; <b>a first computer coupled to said network: and a second computer coupled to said network,</b>
said second computer means configured to produce a graphical environment, wherein said graphical environment is based, at least in part, on information transferred from said first computer means to said second computer means over said network means, and human/computer interface means, wherein said	said second computer including a visual display and a human/computer interface device capable of providing a second computer input, said <b>human/computer interface device including at least one actuator</b> capable of <b>providing physical force feedback in response to a force feedback signal provided</b>

<b>human/computer interface means comprises an actuator means,</b>	<b>by said second computer,</b>
said <b>second computer means further comprising means for interpreting said haptic feedback information repeatedly received from said first computer means over said network</b> means, updating said graphical environment based, at least in part, on said information, and causing said actuator to generate a physical feel sensation at said human/computer interface means based, at least in part, on said haptic feedback information.	said second computer developing a web page on said visual display from information received from said first computer over said network, said web page being associated with stored force feedback information, wherein said <b>second computer produces said force feedback signal based on said information received from said first computer over said network</b> , based on said stored force feedback information, and based on said second computer input.

As can be seen above, the invention defined in claim 12 of this application is an obvious variation of the invention defined in claim 25 of the patent.

***Claim Rejections - 35 USC § 103***

5. Claims 12, 13, 17-23, 36-40, 42, 43, 58-70, 72-76, 78-82, 102-104, 106, 108-111, 113-116, 120, 121 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bakoglu et al (US 5,685,775 hereinafter Bakoglu) in view of Pierce et al (5,299,810 hereinafter Pierce) and Yamakita et al ("Tele-Virtual Reality of Dynamic Mechanical Model", hereinafter Yamakita).

With regard to claim 12, Bakoglu discloses a method and apparatus for playing the same video game by a number of players at remote locations over a telephone network via modem. Fig. 2 of Bakoglu discloses a system comprising a first computer (video game machine for player 1) coupled to a network means (phone network); a second computer (video game machine for player 2) coupled to the network means, the second computer remote from the first computer. Bakoglu also discloses the system comprising control unit (human/computer interface means) and the first and second computers configured to produce graphical environment, i.e. display of the video graphical images.

Bakoglu does not disclose the first and second computers configured to transfer and update the graphical environment information and haptic feedback information between the first computer and the second computer over the network means. Bakoglu also does not disclose the human/computer interface means comprising an actuator means and causing the actuator to generate a physical feel sensation at the human/computer interface means based on the haptic feedback information.

Pierce teaches a video system (figures 1, 2) comprising a first computer (74) and a second computer (76), the first computer produces and updates first image based at least in part on information received from a second computer (figure 2, item 76) and receives haptic feedback information from the second computer, and based at least in part on the first computer input (column 1, lines 57-69 and column 2, lines 1-10; col. 5, lines 17-45; col. 9, lines 32-60), the second computer produces and updates the second image based at least in part on information received from the first computer and receives haptic feedback information from the first computer, and based at least in part on the second computer input (column 1, lines 57-69 and

column 2, lines 1-10; col. 5, lines 17-45; col. 9, lines 32-60). Pierce also teaches the human/computer interface means comprising an actuator means (26, 28) and causing the actuator to generate a physical feel sensation at the human/computer interface means based on the haptic feedback information (col. 4, line 67 to col. 5, line 4).

Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the video game system of Bakoglu to comprise video games at both sites that can transfer and update the graphical environment information and haptic feedback information between the first and second computers and to have a haptic sensation actuator as part of the user interface as taught by Pierce so as to provide a realistic simulation of the control of the game play and to provide multi-sensor indication of events that are initiated by another operator, or the computer.

Furthermore, Yamakita illustrates in Fig. 1 that two Sites 1 and 2 remote each other transmitting and receiving position and haptic information (player action information) to and from a satellite such that players will feel as if they are playing at the same location where it is clear that the satellite function as a server network between the two computers. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to further modify the system of Bakoglu as modified by Pierce to use a server network for transmitting and receiving position and haptic information (player action information) between two remote computers via a network as taught by Yamakita such that the remote player can feel the game play actions/sensation caused by the actions of the other player to provide a more enhanced realistic simulation of game play.



With regard to claim 13, Pierce teaches the second computer input comprises at least one of a position input for the human/computer interface device, and a button click input (figure 2, item 90).

With regard to claim 17, Pierce teaches “computer information comprises information representing haptic feedback information” (figure 1, item 114) ; Bakoglu teaches “said first computer is remote from said second computer” as claimed.

With regard to claim 18, Pierce teaches computer information includes haptic feedback information indicating a tactile sensation to be output by said second haptic feedback device (figure 1, item 58 and figure 2, item 26).

With regard to claim 19, Bakoglu as modified by Pierce and Yamakita teaches sending second computer information from said second computer to said first computer over said network.

With regard to claim 20, Pierce teaches said second computer information includes said input information from said second haptic feedback device and haptic feedback information a tactile sensation to be output by said first haptic feedback device (figure 1, item 58 and figure 2 item 26).

With regard to claim 21, Pierce teaches said image includes displaying a first graphical object controlled by a user of said first haptic feedback device, and displaying a second graphical object controlled by a user of said second haptic feedback device (figure 1).

With regard to claim 22 Bakoglu as modified by Pierce does not illustrate said first and second graphical objects are paddles. Pierce instead illustrates them being vehicles such as a car however since a boat is also a vehicle and further since boats can have paddles such a feature

would be obvious and simply viewed as merely directed toward an obvious intended use of the Bakoglu as modified by Pierce gaming system.

With regard to claim 23, the combination of Bakoglu and Pierce teaches said first and second graphical objects are displayed in a web page is viewed as an obvious feature of a network because the window opened up is considered the web page when talking to a remote user.

With regard to method claim 38, note the discussion of claim 12 above. Pierce teaches said second computer information comprises position information describing a position of a manipulandum of a second haptic feedback device (figure 1, items 68 and 60).

With regard to claims 36, 37, 39, and 40, the combination of Bakoglu and Pierce was shown above read on all limitation of these claims.

With regard to claims 42-43, the limitations are taught by the combination of Bakoglu and Pierce.

With regard to claim 58, note the discussion of claim 12. Furthermore, Bakoglu and Yamakita teach receiving a first computer information from a first computer at a server computer over a network. Pierce and Yamakita teach the computer information comprising haptic feedback information.

With regard to claims 59-70, the combination of Bakoglu and Pierce was shown above to read on all these limitations.

With regard to claim 75, Pierce teaches "said information comprising haptic feedback information and position information for a graphical object displayed by said second computer"

(figure 1 illustrates graphical objects on two displays and items 110 and 114 correlate to haptic feedback).

With regard to claims 72, 73, 115, Bakoglu would have the first computer (player 2) is a client computer and said second computer is a server computer (first player) or two computer are client computers because it is obvious that when you are playing the computer instead of another actual user you would refer to one computer as sever and the others as clients.

With regards to claims 74 and 76, the combination of Bakoglu and Pierce was shown above to teach all of these limitations.

With regard to claim 78, the combination of Bakoglu and Pierce teaches said visual display is updated by moving a graphical object within a graphical game environment based on position data received from said haptic feedback device, where a collision between said graphical object and a different graphical object can detected to cause said tactile sensation to be output (see Pierce figure 1, item 114).

With regard to claim 79, the combination of Bakoglu and Pierce teaches said first computer receives an indication of a gaming event in said information, said first computer synchronizing said visual display associated with said gaming event with said tactile sensation that is associated with said gaming event (see Pierce figure 1, item 114 and 110).

With regard to claim 80-81, the combination of Bakoglu and Pierce teaches said gaming event is a collision, explosion (see Pierce figure 1, item 114 and 110).

With regard to claim 82, the combination of Bakoglu and Pierce teaches said visual display is updated at a rate substantially faster than said tactile sensation.

With regard to method claims 102, 103, note the discussion of claim 12 above. In addition, Bakoglu teaches "a first memory coupled to said first processor" and "a second memory coupled to said second processor" (see Fig. 4, the buffers correspond to memory).

With regard to claims 104, 106, Pierce teaches "said first force feedback device is coupled to a manipulandum configured to move in two degrees of freedom" (figure 2, item 62 "Steering Handle" act as joystick for control of graphical "vehicle").

With regards to claim 108, the combination of Bakoglu and Pierce was shown above to teach all of these limitations where the first computer and the second computer communicate with at least one server computer ("master") over said network.

With regard to claim 109, Pierce teaches the first image includes a graphical object that can interact with a projectile (e.g., col. 11, lines 3-17).

With regard to claims 110, 111, Pierce was shown above read on all limitation as claimed (e.g., col. 11, lines 3-66).

With regard to claim 113, Pierce teaches a visual display (42) coupled to the first processor.

With regards to claim 114, the combination of Bakoglu and Pierce was shown above to teach all of these limitations where a server computer connected to the network.

With regard to claim 116, the combination of Bakoglu and Pierce do not illustrate the use of well known standards of practice such as TCP/IP protocols and since the references lacks specific communication details it would have been obvious to one of ordinary skill in the art at the time of invention was made to implement these features because the combination of Bakoglu and Pierce must use some communication method and one would be motivated to use

conventional methods of communication because there is less risk in using standards that are known to work. The examiner also serves official Notice that TCP/IP existed before applicant's effective filing date.

With regard to claims 120, 121, Pierce teaches the processor as claimed.

6. Claims 14-15, 25, 92-96, 98-101, 105, 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bakoglu and Pierce and Yamakita, and further in view of Ouhyoung et al. ("A low-Cost Force Feedback Joystick and its use in PC Video Games", hereinafter Quhyoung) and Kelley et al. ("MagicMouse: Tactile and Kinesthetic Feedback in the Human-Computer Interface using an Electromagnetically Actuated Input/Output Device", hereinafter Kelley).

With regard to claim 14, the combination of Bakoglu and Pierce and Yamakita was shown above in regard to the rejection of claims 12.

The combination of Bakoglu and Pierce and Yamakita does not illustrate the use of, "a local controller means that communicates with said second computer means",

Ouhyoung teaches a local controller with the above claim features in figure 3b and note also used in a PC Video Game.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Pierce and Pierce and Yamakita device to have the above features as taught by Ouhyoung because Kelley on page 9 makes a motivational statement, "a dedicated microcontroller is employed to distribute the computational load and to afford adequate force feedback".

With regard to claim 15, the combination Bakoglu/Pierce/Yamakita/Ouhyoung/Kelley teaches a system as recited in claim 14 wherein said second computer means sends a force feedback command to said local controller means that can be parsed by said local controller means such that said controller means can control said actuator means in response to said force feedback command in a control loop with said sensor means (see Ouhyoung figures 3b and 4).

With regard to claim 25, the combination Bakoglu/Pierce/Yamakita/Ouhyoung/Kelley teaches a method as recited in claim 17 wherein said second haptic feedback device includes a local controller that communicates with said second computer, wherein said local controller parses a haptic feedback command sent by said second computer such that said local haptic can control said actuator in response to said haptic feedback command in a control loop with at least one sensor of said second haptic feedback device (see Ouhyoung figures 3b and 4).

With regard to claim 105, the combination Bakoglu/Pierce/Yamakita/Ouhyoung/Kelley teaches a system as recited in claim 104. in addition Pierce teaches "at least one sensor for sensing positions of said manipulatable object " (It is clear that a steering wheel such as item 62 must have a sensor detecting its position in order for it to work and control the graphical object).

With regard to claim 107, the combination Bakoglu/Pierce/Yamakita/Ouhyoung/Kelley was found above to teach all of the limitations of claim 107.

With regard to method claim 101, the combination of Bakoglu/Pierce/Yamakita teaches "each of said plurality of client computers in communication with the Internet" (claim term "internet" is broadly read to be any modem network), enabling said computer-game simulation of said particular client computer to determine if said first graphical object displayed on said client computer has collided with said second graphical object and determine a tactile sensation

to generate if said collision has occurred (see Pierce et al. figures 3 and 4). Ouhyoung teaches a local controller with the above claim features in figure 3b and note also used in a PC Video Game. Thus, the combination Bakoglu/Pierce/Yamakita/Ouhyoung/Kelley was found above to teach all of the limitations of claim 101.

With regard to claims 94-96, 98-100 the combination of Bakoglu/Pierce/Yamakita/Ouhyoung /Kelley was shown above to read on all of these limitations.

With regard to claim 92, see e.g. Pierce col. 8 lines 16-35 which discloses determining if a shot was fired, and inherently a button input is present in order to determine this shot.

With regard to claim 93, the combination of Bakoglu/Pierce/Yamakita/Ouhyoung/Kelley teaches said first graphical object is a representation of sporting equipment because Pierce illustrates a car game and since race cars are the equipment used by race car drivers it reads on it.

### ***Response to Arguments***

7. Applicant's arguments with respect to claims 12-15, 17-23, 25, 36-40, 42, 43, 58-70, 72-76, 78-82, 92-96, 98-111, 113-116, 120, 121 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's remarks regarding Bakoglu (page 17 last paragraph to page 18 first full paragraph) are not persuasive. The haptic feedback information in the game system is a player action which gives the game player a tactile sensation of the effects in controlling the game play. Bakoglu teaches "the only information exchanged between game machines over telephone network are **player actions** and machine-clock related information" (emphasis added), thus, modifying the Bakoglu device to send and/or receive haptic feedback information would not

alter the mode of operation of the device since the haptic feedback information is player action information.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Regina Liang/  
Primary Examiner, Art Unit 2629